IN THE CLAIMS

Please amend the claims as follows:

1-115. (Cancelled)

116. (Currently amended) An apparatus in a wireless ~~multiple-access multiple-input multiple-output (MIMO)~~ communication system, comprising:

a transmit data processor operative to

process system parameters and a pilot for transmission via a broadcast channel, wherein the pilot is used for channel estimation of ~~the~~ a downlink,

process scheduling information for transmission via a forward control channel, wherein the scheduling information is for data transmission on the downlink and an uplink, and

process traffic data for transmission via a forward channel; and

a receive data processor operative to

process user requests for system access received via a random access channel, and

process traffic data received via a reverse channel, and

wherein at least one channel among the broadcast channel, the forward control channel, the forward channel, the random access channel, and the reverse channel is configurable, and wherein the system parameters indicate configuration of the at least one configurable channel.

117. (Previously presented) The apparatus of claim 116, wherein the broadcast channel, the forward control channel, the forward channel, the random access channel, and the reverse channel are time division multiplexed within a frame having a predetermined time duration.

118. (Original) The apparatus of claim 116, wherein the broadcast channel and the forward control channel are transmitted using a diversity mode supporting data transmission with redundancy from a plurality of transmit antennas.

119. (Original) The apparatus of claim 116, wherein the forward channel and the reverse channel support a diversity mode and a spatial multiplexing mode, the diversity mode supporting data transmission with redundancy from a plurality of transmit antennas, and the spatial multiplexing mode supporting data transmission on a plurality of spatial channels.

120. (Original) The apparatus of claim 116, wherein the random access channel supports a single-input multiple-output (SIMO) mode and a beam-steering mode, the SIMO mode supporting data transmission from a single transmit antenna to multiple receive antennas, and the beam-steering mode supporting data transmission on a single spatial channel associated with a highest rate among a plurality of spatial channels.

121. (Currently amended) An apparatus in a wireless ~~multiple-access multiple-input multiple-output (MIMO)~~ communication system, comprising:

means for processing system parameters and a pilot for transmission via a broadcast channel, wherein the pilot is used for channel estimation of ~~the~~ a downlink;

means for processing scheduling information for transmission via a forward control channel, wherein the scheduling information is for data transmission on the downlink and an uplink;

means for processing traffic data for transmission via a forward channel;

means for processing user requests for system access received via a random access channel; and

means for processing traffic data received via a reverse channel, and

wherein at least one channel among the broadcast channel, the forward control channel, the forward channel, the random access channel, and the reverse channel is configurable, and wherein the system parameters indicate configuration of the at least one configurable channel.

122. (Previously presented) The apparatus of claim 121, wherein the broadcast channel, the forward control channel, the forward channel, the random access channel, and the reverse channel are time division multiplexed within a frame having a predetermined time duration.

123. (Previously presented) The apparatus of claim 121, wherein the broadcast channel and the forward control channel are transmitted using a diversity mode supporting data transmission with redundancy from a plurality of transmit antennas.

124. (Previously presented) The apparatus of claim 121, wherein the forward channel and the reverse channel support a diversity mode and a spatial multiplexing mode, the diversity mode supporting data transmission with redundancy from a plurality of transmit antennas, and the spatial multiplexing mode supporting data transmission on a plurality of spatial channels.

125. (Previously presented) The apparatus of claim 121, wherein the random access channel supports a single-input multiple-output (SIMO) mode and a beam-steering mode, the SIMO mode supporting data transmission from a single transmit antenna to multiple receive antennas, and the beam-steering mode supporting data transmission on a single spatial channel associated with a highest rate among a plurality of spatial channels.

126–216. (Cancelled)

217. (Currently amended) A computer-program product for a wireless ~~multiple-access multiple-input multiple-output (MIMO)~~ communication system comprising a computer readable medium having a set of instructions stored thereon, the set of instructions being executable by one or more processors and the set of instructions comprising:

instructions for processing system parameters and a pilot for transmission via a broadcast channel, wherein the pilot is used for channel estimation of ~~the~~ a downlink;

instructions for processing scheduling information for transmission via a forward control channel, wherein the scheduling information is for data transmission on the downlink and an uplink;

instructions for processing traffic data for transmission via a forward channel;

instructions for processing user requests for system access received via a random access channel; and

instructions for processing traffic data received via a reverse channel, and

wherein at least one channel among the broadcast channel, the forward control channel, the forward channel, the random access channel, and the reverse channel is configurable, and wherein the system parameters indicate configuration of the at least one configurable channel.

218. (Previously presented) The computer-program product of claim 217, wherein the broadcast channel, the forward control channel, the forward channel, the random access channel, and the reverse channel are time division multiplexed within a frame having a predetermined time duration.

219. (Previously presented) The computer-program product of claim 217, wherein the broadcast channel and the forward control channel are transmitted using a diversity mode supporting data transmission with redundancy from a plurality of transmit antennas.

220. (Previously presented) The computer-program product of claim 217, wherein the forward channel and the reverse channel support a diversity mode and a spatial multiplexing mode, the diversity mode supporting data transmission with redundancy from a plurality of transmit antennas, and the spatial multiplexing mode supporting data transmission on a plurality of spatial channels.

221. (Previously presented) The computer-program product of claim 217, wherein the random access channel supports a single-input multiple-output (SIMO) mode and a beam-steering mode, the SIMO mode supporting data transmission from a single transmit antenna to multiple receive antennas, and the beam-steering mode supporting data transmission on a single spatial channel associated with a highest rate among a plurality of spatial channels.

222-224. (Cancelled)

225. (Previously presented) The apparatus of claim 121, further comprising:

means for processing a beacon pilot for transmission via the broadcast channel, wherein the beacon pilot is used for frequency and system acquisition.

226. (Previously presented) The apparatus of claim 121, wherein the system parameters comprise at least one parameter for the forward control channel.

227. (Previously presented) The apparatus of claim 121, wherein the system parameters comprise at least one parameter for the random access channel.

228. (Previously presented) The apparatus of claim 121, wherein the system parameters indicate whether designated overhead messages are sent on the forward channel.

229. (Previously presented) The apparatus of claim 121, wherein the forward channel has a configurable duration, and wherein the system parameters indicate the duration of the forward channel.

230. (Previously presented) The apparatus of claim 121, wherein the reverse channel has a configurable duration, and wherein the system parameters indicate the duration of the reverse channel.

231. (Previously presented) The apparatus of claim 121, wherein the random access channel has a configurable duration, and wherein the system parameters indicate the duration of the random access channel.

232. (Currently amended) The apparatus of claim 121, wherein scheduling information for a user terminal indicates one of multiple transmission modes comprising ~~at least one of~~ a diversity mode, or a spatial multiplexing mode, ~~and~~ or a beam-steering mode, or a combination thereof.

233. (Currently amended) The apparatus of claim 121, wherein scheduling information for a user terminal comprises ~~at least one of~~ timing adjustment information, or power control information, ~~and~~ or rate information, or a combination thereof.

234. (Previously presented) The apparatus of claim 121, further comprising:

means for receiving each user request for system access at one of multiple data rates supported for the random access channel.

235. (Previously presented) The apparatus of claim 121, further comprising:

means for determining a data rate of each user request for system access based on a data rate indicator sent with the user request.

236. (Previously presented) The apparatus of claim 121, further comprising:

means for receiving each user request for system access starting at one of multiple slots available for the random access channel.

237. (Currently amended) A method implemented in an apparatus in a wireless ~~multiple-access multiple-input multiple-output (MIMO)~~ communication system, comprising:

processing system parameters and a pilot for transmission via a broadcast channel, wherein the pilot is used for channel estimation of ~~the~~ a downlink;

processing scheduling information for transmission via a forward control channel, wherein the scheduling information is for data transmission on the downlink and an uplink;

processing traffic data for transmission via a forward channel;

processing user requests for system access received via a random access channel; and

processing traffic data received via a reverse channel, and

wherein at least one channel among the broadcast channel, the forward control channel, the forward channel, the random access channel, and the reverse channel is configurable, and wherein the system parameters indicate configuration of the at least one configurable channel.

238. (Previously presented) The method of claim 237, wherein the broadcast channel, the forward control channel, the forward channel, the random access channel, and the reverse channel are time division multiplexed within a frame having a predetermined time duration.

239. (Previously presented) The method of claim 237, wherein the broadcast channel and the forward control channel are transmitted using a diversity mode supporting data transmission with redundancy from a plurality of transmit antennas.

240. (Previously presented) The method of claim 237, wherein the forward channel and the reverse channel support a diversity mode and a spatial multiplexing mode, the diversity mode supporting data transmission with redundancy from a plurality of transmit antennas, and the spatial multiplexing mode supporting data transmission on a plurality of spatial channels.

241. (Previously presented) The method of claim 237, wherein the random access channel supports a single-input multiple-output (SIMO) mode and a beam-steering mode, the SIMO mode supporting data transmission from a single transmit antenna to multiple receive antennas, and the beam-steering mode supporting data transmission on a single spatial channel associated with a highest rate among a plurality of spatial channels.

242. (New) The method of claim 237, wherein a plurality of transmission modes are supported for the broadcast channel, the forward control channel, the forward channel, the random access channel, and the reverse channel, each transmission mode being associated with different spatial processing.

243. (New) The method of claim 242, wherein the plurality of transmission modes include at least one transmission mode supporting transmission from a plurality of transmit antennas.

244. (New) The method of claim 242, wherein the plurality of transmission modes include at least one transmission mode supporting transmission from a single transmit antenna.

245. (New) The apparatus of claim 121, wherein a plurality of transmission modes are supported for the broadcast channel, the forward control channel, the forward channel, the

random access channel, and the reverse channel, each transmission mode being associated with different spatial processing.

246. (New) The apparatus of claim 245, wherein the plurality of transmission modes include at least one transmission mode supporting transmission from a plurality of transmit antennas.

247. (New) The apparatus of claim 245, wherein the plurality of transmission modes include at least one transmission mode supporting transmission from a single transmit antenna.